

# AGIA

## **Summary of the Commissioners' Findings and Determination**

**Special Session  
June 2008**

# Commissioners' AGIA Findings and Determination



- The pipeline project proposed by TC Alaska's application
  - will sufficiently maximize the benefits to the people of Alaska, and
  - merits issuance of an AGIA license.
- Issuing an AGIA License to TC Alaska maximizes benefits to Alaskans more than pursuing an LNG project or the Producers Project.

# Maximizing Benefits to Alaskans



- Get a Pipeline
- Jobs and long-term careers
- Opportunity of affordable energy for Alaskans
- Maximize state revenue and create opportunity for future growth of state economy

# Maximizing Benefits to Alaskans



- Get a Pipeline
  - A feasible project plan, sponsored by a capable pipeline company
  - An economic project likely to attract firm transportation commitments and secure financing
- Jobs and long-term careers
- Opportunity of affordable energy for Alaskans
- Maximize state revenue and create opportunity for future growth of state economy

# Maximizing Benefits to Alaskans



- Get a Pipeline
- Jobs and long-term careers
  - True “open access” for explorers
- Opportunity for affordable energy for Alaskans
- Maximize state revenue and create opportunity for future growth of state economy

# Maximizing Benefits to Alaskans



- Get a Pipeline
- Jobs and long-term careers
- Opportunity of affordable energy for Alaskans
  - Off-Take Points, and Distance-Sensitive Rates
  - Expansion Provisions
  - Does not interfere with “Bullet Line” project
- Maximize state revenue and create opportunity for future growth of state economy

# Maximizing Benefits to Alaskans



- Get a Pipeline
- Jobs and long-term careers
- Opportunity of affordable energy for Alaskans
- Maximize state revenue and create opportunity for future growth of state economy
  - Lowest Reasonable Transportation Rates (tariff)
  - Expansion Provisions

# TC Alaska Project Evaluation



- Economic Evaluation
  - Net Present Value (NPV) to the State
  - NPV to the Producers
- Likelihood of Success

- As allowed in AGIA, TC Alaska's application had alternative project designs based on how much gas was committed at the initial open season
- Analysis considered many different possible designs

- Two “Base Cases” Reported for TC Alaska’s Project
  - “Proposal Base Case”
    - 4.5 Bcf/d (including 0.9 Bcf/d from Pt. Thomson)
    - 75/25 debt to equity
    - 14% return on equity
    - 25 year shipping contracts
  - “Conservative Base Case”
    - 4.0 Bcf/d (No gas from Pt. Thomson)
    - 75/25 debt to equity
    - 14% return on equity
    - 20 year shipping contracts

- Factors in NPV Analysis
  - Gas Prices
  - Transportation Costs
    - Pipeline Project Capital Costs
    - Cost Escalation Rates
    - Initial Pipeline Throughput
    - Tariff Terms (e.g. debt to equity ratio)
  - Pipeline Construction Schedule
  - Gas Production Costs

- Gas Price Models
  - Separate price forecasts were obtained from
    - US DOE's Energy Information Administration (EIA)
    - Wood Mackenzie
    - Gas Strategies Consulting
    - Black and Veatch

# Project Economic Analysis

- Project Cost and Schedule
  - “Technical Team”, included
    - Westney Consulting
    - Energy Project Consultants
    - Pingo International
    - AMEC Paragon
    - Colt Engineering
    - Mustang Management
    - Energy Operations Consulting
    - Black and Veatch
    - Merlin Associates

# Project Economic Analysis



- Project Cost Estimates – Mid-Range
  - Proposal Base Case
    - \$31 Billion in today's dollars
      - \$3.19 tariff
    - \$45 Billion in dollars spent
      - \$4.73 tariff
  - Conservative Base Case
    - \$29 Billion in today's dollars
      - \$3.59 tariff
    - \$42 Billion in dollars spent
      - \$5.33 tariff

# Project Economic Analysis



## Project Cost Estimates – Why Higher than TC Alaska’s?

- Different Purposes – Project Planning vs. Risk Assessment
- TC Alaska’s Cost Estimates are “realistically aggressive” and appropriate for project planning
  - Analytical team tested sensitivity of estimates to changed circumstances
- Difference Between Assumptions Mandated in the RFA and the final analysis assumptions
  - Exchange rate, cost escalation rate
- Assumed “Neutral Competence” of Operator
- Cost of the GTP
  - One vs. Two seasons of sea-lift

# Project Economic Analysis



- Project Schedule
  - Mid-range probability put first gas in 2020
  - State's Canadian Counsel advised on expected regulatory timeline in Canada, including First Nation issues

## Reporting NPV Results – Proposal Base Case

- Gas Prices (WoodMac)
- Transportation Costs
  - Pipeline Project Capital Costs (\$31.5 billion)
  - Cost Escalation Rates (4%)
  - Initial Pipeline Throughput (4.5 Bcf/d)
  - Tariff Terms (e.g. debt to equity ratio[75/25])
- Pipeline Construction Schedule (2020)
- Gas Production Costs

# Project Economic Analysis



## Proposal Base Case Results

- The State of Alaska would realize an estimated cash flow of **\$261.5 billion**, and an estimated NPV of approximately **\$66.1 billion** at a discount rate of 5%.
- The Major North Slope Producers would realize an estimated cash flow of **\$147.4 billion**, and an estimated NPV of approximately **\$13.5 billion** at a discount rate of 10%.

# Project Economic Analysis

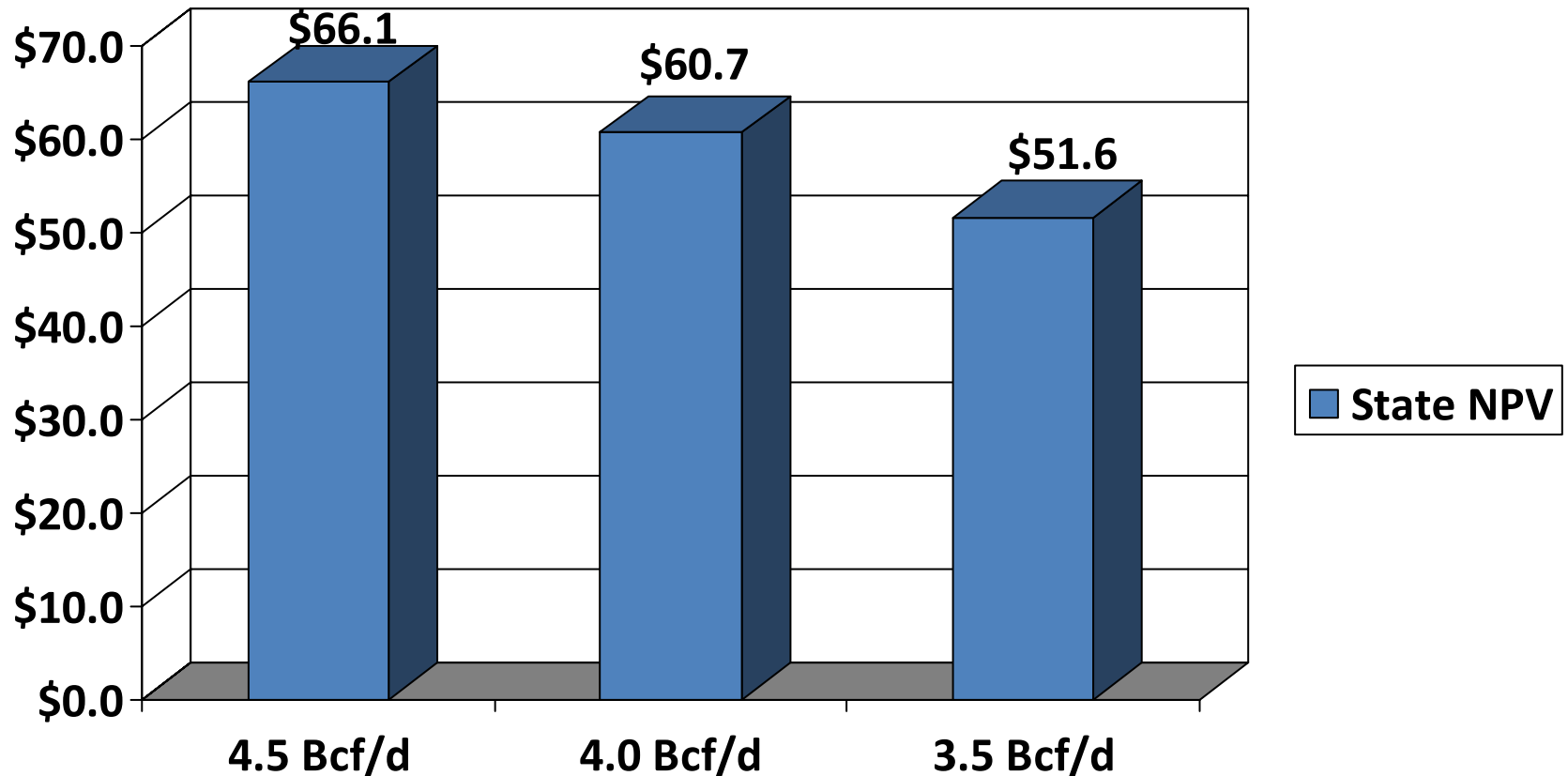


## Conservative Base Case Results

- The State's NPV decreases by 8% from the Proposal Base Case to **\$60.7 billion**.
- The Major North Slope Producers NPV decreases by 9% to **\$12.3 billion**.

# Project Economic Analysis

## State NPV at Various Initial Throughput



- The Project Economics are Extremely Robust
  - It would take a “perfect storm” of worst case scenarios of multiple factors for the Project to be uneconomic to the Producers.
  - Indeed, a “perfect storm” of low gas prices and high construction costs, together, are not enough to generate a negative NPV for the State.

# \$500 Million Matching Contribution



## Effect of State's \$500 Million Matching Contribution to TC Alaska's Project

- Tariff is reduced by 6 cents
- State's NPV **increases** by \$200 Million

# TC Alaska Project Is Likely to Succeed



- TC Alaska has submitted a plan for its project that is technically feasible, reasonable, and specific.
- TC Alaska has demonstrated the technical and financial ability to construct the project.
- TC Alaska has submitted a reasonable commercial plan which, coupled with economic and political factors, should help to encourage firm shipping commitments

# Attracting Gas Commitments to TC Alaska's Project



- Robust economics and reasonable commercial terms.
- Extremely capable pipeline company.
- State's Upstream Inducements
  - 10-year tax certainty
  - Royalty valuation certainty
- Avoid Problems of Not Committing Gas
  - Duty to develop
  - Anti-trust
  - Congressional Attention
  - Shareholder Questions

## Contingent Liability Issue

- Risk of litigation is significantly overstated.
- Potential legal claims by withdrawn partners are, at best, weak and unlikely to succeed.
- Not a reasonable basis for the Major North Slope Producers to refrain from partnering with TC Alaska or contracting with the Project.

# TC Alaska Project Comparisons



- Producer Project (Denali)
- LNG Options

# Denali Project Is More Risky For the State



- Lack of commitments create risks for state
- No certainty on project schedule
  - Likely Anti-trust Challenges
- Undefined tariff terms
  - Example, 50/50 debt to equity increases the tariff by \$1 compared to 75/25, costing the state over \$8 billion in NPV
- Undefined state fiscal concessions needed for Denali
  - SGDA concessions worth over \$10 billion
- **No Certainty on Expansion Provisions**
  - Producer Incentives to exercise basin control
  - Stifles North Slope basin development
  - Loss of long-term jobs and careers
  - Loss of Potential LNG development

# Producer Pipeline Considerations



- Even if TC Alaska License is issued, Producers can proceed with Denali, commit gas to it, and build it without any additional state concessions
- State has significant interest in attracting Producers to commit gas to TC Alaska's project
  - Expansion Provisions
  - Lowest reasonable tariff - Highest Netback
- State Needs to Use Power of Competition to Protect Alaskans Interests

- Extensive Analysis of LNG economics and likelihood of success
  - Asian market price
  - LNG project costs and schedule
  - How LNG projects are developed
  - Potential hurdles for LNG projects

# LNG Economic Analysis



- Ran economics on both a 2.7 bcf/d and 4.5 Bcf/d projects
- Alaskan LNG is economical and viable
- Confirmed Asian market premium price
- Liquefaction plant costs create an economic drag
- LNG does not provide time or cost savings over TC Alaska project
- State and Producer NPV lower under all stand-alone LNG options than under TC Alaska project

# LNG Likelihood of Success



- LNG is viable, but less likely to succeed without TC Alaska Project
  - Entire project stream, from gas supply, to pipeline, to liquefaction, to tankers, to re-gasification, to gas sales must be negotiated and executed nearly **simultaneously**
  - Expansions are more difficult because of size
  - Export authorization is a challenge

# Opportunity for “Y line” LNG



- If gas is committed, TC Alaska will transport gas from Delta Junction to Prince William Sound
- LNG project will benefit from TC Alaska’s financial and technical capabilities
- State will benefit from supplying gas to both LNG and North American markets
- “Y line” is the best LNG option for the state

# Additional Considerations



- Treble Damages Exposure
- Competition

# Treble Damages Exposure



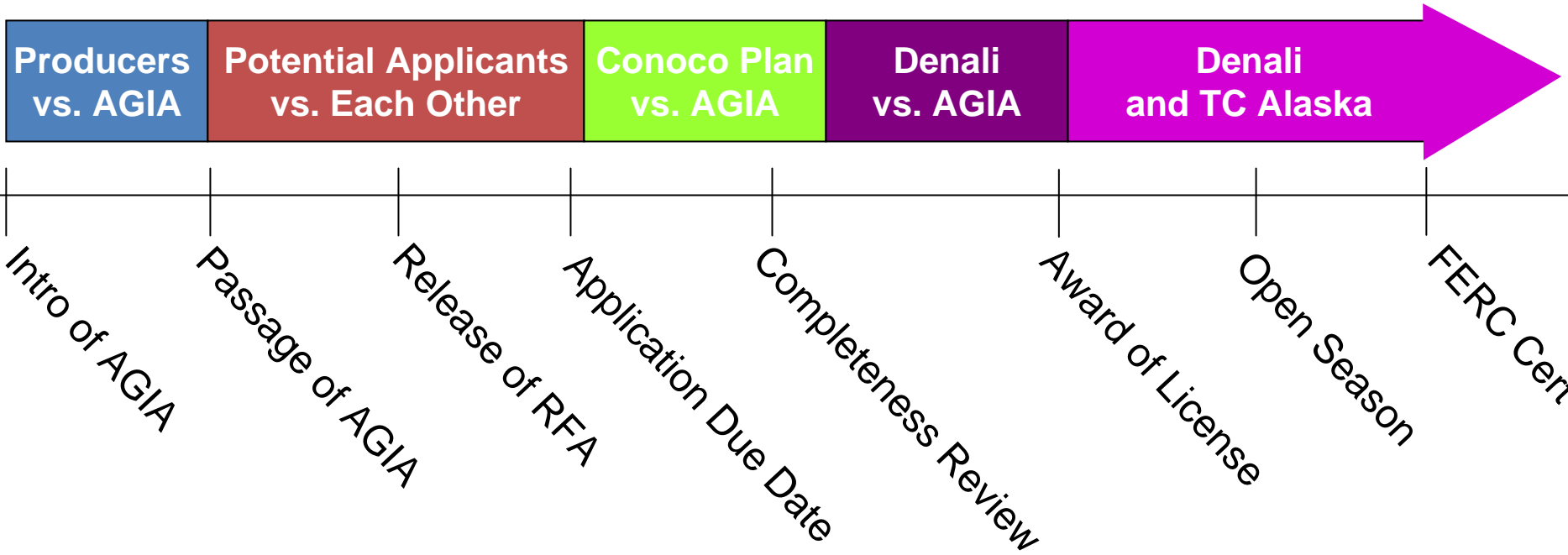
## \$Millions

Year	Annual Spend	State Expenditure	TC Alaska Expenditure	3x TC Alaska Expenditure	Cumulative State Exposure
2008	\$41	\$21	\$21	\$62	\$82
<b>2009*</b>	<b>\$42</b>	<b>\$21</b>	<b>\$21</b>	<b>\$63</b>	<b>\$166</b>
2009	\$34	\$31	\$3	\$10	\$207
2010	\$141	\$127	\$14	\$42	\$376
2011	\$144	\$130	\$14	\$43	\$549
2012	\$147	\$132	\$15	\$44	\$726
2013	\$75	\$39	\$36	\$109	\$874
<b>Total</b>	<b>\$625</b>	<b>\$500</b>	<b>\$125</b>	<b>\$374</b>	<b>\$874</b>

**\*Scheduled Open Season**

**Expenditure Schedule Based on TC Alaska Application**

# Competition



- TC Alaska's Project Maximizes Benefits to Alaskans
  - Best Chance to Get a Pipeline
  - Expansion Provisions Provide Best Chance for Jobs and Long-Term Careers for Alaskans
  - Increases Alaskans Opportunity of Affordable Energy
  - Maximizes State Revenue
- TC Alaska's Project is Better for the State than LNG Options and the Producer Project (Denali)